REMARKS

In response to the Office Action mailed November 22, 2006, Applicants respectfully request reconsideration. Claims 29, 45, and 61 are amended herein, but no new issues are raised thereby because each claim has been amended to incorporate limitations from a claim previously depending therefrom. Specifically, claim 29 is amended to incorporate the limitations of dependent claim 31, claim 45 is amended to incorporate the limitations of dependent claim 47, claim 61 is amended to incorporate the limitations of dependent claim 63, and claims 31, 47, and 63 are cancelled. Because claims 31, 47, and 63 were previously pending in this application and the amendments made herein only incorporate the limitations of these dependent claims into the independent claims from which each previously depended, these amendments do not raise any new issues that would require further search and/or consideration.

To further the prosecution of this application, each of the rejections in the Office Action has been carefully considered and is addressed below. The application, as presented, is believed to be in condition for allowance.

Claim Rejections

The Office Action rejects claims 29, 45, 61, 74, 80, and 86 under 35 U.S.C. §102(e) as purportedly being unpatentable over Hochberg (Pub. No. 2005/0055518). The Office Action does not specify the basis for the rejection of claims 30-44, 46-60, 62-73, 75-79, 81-85, and 87-91, but asserts that these claims "can be rejected on a similar basis to the above." *See Office Action, page 4*

Overview of Embodiments Of The Invention

Embodiments of the invention are directed to retention periods for units of data stored on a storage system. In a system that implements a retention period for a unit of data, the system may associate a retention period with the unit of data (Specification, page 9, lines 6-9). The retention period may define a period of time during which the unit of data cannot be deleted or modified (Specification, page 9, lines 9-10).

In some embodiments, retention classes may be used to define retention periods for one or more units of data stored on a storage system. For example, a unit of data may identify a retention class to which it belongs (Specification, page 31, lines 16-19). The retention class may have a value

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associated with it that defines the retention period for all units of data the belong to the retention class (Specification, page 31, lines 16-19). For example, as shown in Figure 8, units of data belonging to the "E-mail" retention class have a retention period of seven years from the date they were initially stored on the storage system, while units of data belonging to the "Financial Records" retention class have a retention period of five years from the date of their initial storage (Specification, page 31, lines 24-28; Figure 8).

The retention period for the units of data belonging to a particular retention class may be modified by altering the value associated with the retention class (Specification, page 31, lines 16-21). The use of retention classes allows the retention period for a large number of units of data to be modified without having to individually alter the retention period for each unit of data (Specification, page 31, lines 20-21).

When the storage system receives a request to delete a unit of data, the storage system may first determine to which retention class the unit of data belongs, and then determine the value of the retention period for the retention class (Specification, page 31, lines 28-31). This value is the retention period for the unit of data. The storage system may then determine whether the retention period has expired and, if it has not, deny the deletion request (Specification, page 31, line 31 – page 32, line 2).

It should be appreciated that the foregoing overview of embodiments of the invention is provided merely to assist the Examiner in appreciating various aspects of the present invention. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Examiner is requested to not rely upon the foregoing summary in interpreting any of the claims or in determining whether they patentably distinguish over the prior art of record, but rather is requested to rely only upon the language of the claims themselves and the arguments specifically related thereto provided below.

Discussion of Hochberg

Hochberg is directed to a method and system for managing retention of stored objects (Abstract). When a request to store an object is received, a new object entry is added to an object table (¶38, lines 4-18; Figure 4, blocks 100 and 102). The object entry in the object table specifies an object ID for the object, a name for the object, the location at which the object is stored, the archive policy associated with the object, and several other fields (¶38, lines 15-18; Figure 2). The

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archive policy for the object is specified in the request to store the object (¶38, lines 4-18). If the specified archival policy is not an event-based policy, then an expiration entry for the object is created in an expiration table (¶39, lines 4-11; Figure 4, block 112). The expiration entry for the object specifies its object ID; the retention period start (which is set as the current time), the retention period (which is set to the retention specified in the archive policy defined for the object), and a status field (which is set to "active") (¶39, lines 6-17; Figure 3).

When a request to delete an object is received, the expiration entry for the object in the expiration table is accessed, and it is determined if the retention period has expired by determining whether the current time minus the retention period start (specified in the expiration entry) exceeds the retention period specified in the expiration entry (¶46, lines 13-26; Figure 8, blocks 244 and 246). If not, then the request to delete the object is denied (Figure 8, block 240). Otherwise, the object is deleted and its entries removed from the object table and expiration table (Figure 8, block 234).

Independent Claims 29 and 45

Each of claims 29 and 45 recites: (B) determining whether a previously-defined retention period for the unit of data has expired by performing acts of; (B1) retrieving first information, associated with the unit of data, that identifies a manner of accessing second information specifying the previously-defined retention period; and (B2) using the first information to retrieve the second information specifying the previously-defined retention period...wherein the first information is information identifying a retention class to which the unit of data belongs, and wherein the second information is a retention period associated with the retention class.

Hochberg does not disclose the concept of a retention class and therefore necessarily does not disclose determining whether a previously-defined retention period for an object has expired by first retrieving information identifying a retention class to which the object belongs, and then using the information identifying the retention class to retrieve a retention period associated with the retention class.

In Hochberg, when a delete request is received, the system does not first determine which archive policy is associated with the object identified in the request, and then determine the retention period specified by the archive policy. Rather, the retention period for an object is determined when the object is stored and an expiration entry for the object is created in the

expiration table (Hochberg, ¶39, lines 4-11; Figure 4, block 112). Thus, when a delete request is received, the retention period specified in the expiration entry is accessed and used to determine whether the object may be deleted. There is simply nothing in Hochberg analogous to the claimed retention class that is evaluated in response to a delete request to determine the retention period for an object.

In rejecting dependent claims 31 and 47 whose limitations have been incorporated, respectively, into claims 29 and 45, the Office Action did not point out where the retention class limitations were believed to be found in Hochberg. However, in rejecting claims 29 and 45, that recites a retention class, the Office Action points to the archive program 12 and retention protection setting 16 in Figure 1, and paragraphs 10 and 21.

Archive program 12 in Figure 1 is the program that performs archive related operations in archive server 2 (e.g, setting and enforcing retention protection policies) (Hochberg, ¶19, lines 6-14; ¶24, lines 1-7). Retention protection setting 16 in Figure 1 is a global variable that indicates whether retention policies are in effect on archive server 2. Thus, activating this setting would cause archive program 12 to inhibit or deny any request that seeks to remove or modify an archived object or remove any record in the archive database prior to expiration of its retention period (Hochberg, ¶19, lines 6-14; ¶24, lines 1-7). Paragraph 10 of Hochberg relates to the use of event-based retention periods, wherein the start of the retention period commences in response to receiving an event signal. Paragraph 21 relates to the use of retention policies in which, after the retention period for an object specified in the policy ends, the object is expired to allow the storage space to be reclaimed during cleanup. None of these cited portions of Hochberg relates to the use of retention classes.

In rejecting some of the other independent claims (i.e., claims 74, 80, and 86) that make reference to modifying a retention period specified by a retention class, the Office Action cites Figure 7 and paragraphs 10 and 45. As discussed above, paragraph 10 relates to the use of event-based retention periods, wherein the start of the retention period commences in response to receiving an event signal and is unrelated to retention classes.

Paragraph 45, in connection with Figure 7, describes how a retention period for an archive policy may be modified in the system of Hochberg. As discussed above, in the system of Hochberg, when an object is stored, an expiration entry is created for the object in the expiration table. This expiration entry for the object specifies its object ID; the retention period start (which is set as the

current time), the retention period (which is set to the retention specified in the archive policy defined for the object), and a status field (which is set to "active") (¶39, lines 6-17; Figure 3). The entry for the object in the expiration table is used to determine if the object may be deleted in response to a request to delete the object (¶46, lines 13-26; Figure 8, blocks 244 and 246).

The process of Figure 7 is a process to modify the retention period specified in the archive policy, but does not involve making modifications to the expiration entries for objects already stored on the system. Thus, in Hochberg, modifying the retention period for an archive policy affects what the retention period will be for future objects to be stored on the archive server that use the archive policy, but does not affect the retention period for objects already stored on the archive server. Thus, paragraph 45 and Figure 7 are unrelated to modifying the retention period for objects already stored on the archive server.

In the Response to Arguments section, the Office Action states, "[i]n response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies...are not recited in the rejected claim(s)." However, the quoted language from Applicants' previous response is an explanation of the way in which the system described in Hochberg works and demonstrates how Hochberg fails to meet the limitations of the claims being argued.

Specifically, in the previous response, Applicants indicated that Hochberg does not disclose the limitations in claims 29 and 45 that recite, "(B) determining whether a previously-defined retention period for the unit of data has expired by performing acts of; (B1) retrieving first information, associated with the unit of data, that identifies a manner of accessing second information specifying the previously-defined retention period; (B2) using the first information to retrieve the second information specifying the previously-defined retention period."

Applicants' previous response noted that Hochberg does not disclose these limitations because Hochberg works in a different way. That is, it was explained that in the system of Hochberg, determining the retention period for an object in response to a delete request for the object is accomplished simply by retrieving the retention period from the expiration entry in the expiration table of the object. This explanation makes clear that Hochberg does not disclose or suggest the claimed limitations of retrieving information identifying a retention class, and using that information to retrieve a retention period associated with the retention class that specifies a previously-defined retention period.

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As seen from the foregoing, Hochberg does not disclose the concept of a retention class. Thus, independent claims 29 and 45 patentably distinguish over Hochberg and the rejection of these claims should be withdrawn. If the rejection of these claims is to be maintained, the Examiner is respectfully requested to more specifically point out what teaching in Hochberg he believes corresponds to the claimed retention class.

Claims 30 and 32-44 depend from claim 29 and claims 46 and 48-60 depend from claim 45 and are patentable for at least the same reasons. As noted above, the Office Action does not indicate what prior art reference is relied on in rejecting these claims or where the limitations of these claims are believed to be found in any prior art reference, but merely asserts that these claims "can be rejected on a similar basis to the above." For this additional reasons, the rejection of these claims is improper.

37 C.F.R. §1.104(c)(2) (quoted in MPEP §707), makes clear that, "[i]n rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular parts relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified."

Further, MPEP §707.07(d) states that, "[a]n omnibus rejection of [a] claim 'on the references and for the reasons of record' is stereotyped and usually not informative and therefore should be avoided. This is especially true where certain claims have been rejected on one ground and other claims on another ground. A plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group."

Applicants respectfully point out that the Office Action fails to comply with these requirements. Specifically, the Office Action does not even directly identify any references relied on in rejecting claims 30, 32-44, 46, and 48-60 (leaving open to speculation whether these claims are believed to be anticipated by Hochberg), certainly does not identify particular parts of any other reference relied on in rejecting these claims, and does not explain the pertinence of any reference to any of these claims. Moreover, the Office Action groups these claims together an omnibus rejection that asserts that these claims are rejected "on a similar basis to the above," even though each of these claims recites limitations that are not recited in their respective independent claims.

In view of the Office Action's failure to meet these requirements, Applicants respectfully point out that the Office Action is believed to be deficient, such that if the rejections are to be maintained, a new Office Action be issued that addresses each claim in the application in the manner required by MPEP §707.

Independent Claim 61

Claim 61 recites a controller to, "determine whether a retention period for the unit of data has expired by performing acts of: retrieving first information, associated with the unit of data, that identifies a manner of accessing second information specifying the previously-defined retention period; and using the first information to retrieve the second information specifying the previously-defined retention period... wherein the first information is information identifying a retention class to which the unit of data belongs, wherein the second information is a retention period associated with the retention class..."

As should be clear from the discussion above, Hochberg fails to disclose or suggest these limitations of claim 61. Thus, claim 61 patentably distinguishes over Hochberg, such that the rejection should be withdrawn.

Claims 62 and 64-73 depend from claim 61 and are patentable for at least the same reasons. Furthermore, for reasons similar to those discussed above for the claims depending from claims 29 and 45, the rejection of these claims is believed to be improper under MPEP §707, as the Office Action does not indicate what prior art reference is relied on in rejecting these claims or where the limitations of these claims are believed to be found in any such prior art reference, but merely asserts that these claims "can be rejected on a similar basis to the above."

Independent Claims 74 and 80

Independent claims 74 and 80 each recite an act of "transmitting a request from the at least one host to the at least one storage system to modify the retention period specified by the retention class, thereby modifying a period of time during which the plurality of data units belonging to the retention class cannot be deleted from the at least one storage system."

Hochberg fails to disclose or suggest this limitation of claims 74 and 80. In the system of Hochberg, a retention period for an object is not modified by modifying the retention period of a retention class to which the object belongs, but rather by modifying information specified in the

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object entry for that particular object. Figure 7 of Hochberg (which is cited in the Office Action to support the rejection) shows a process by which the retention period for an object may be modified by modifying the archive policy specified in the object entry for the object. A request to modify the archive policy is limited to the policy for a single object specified in the request (¶45, lines 4-5; Figure 7, block 200). When it is determined that the modification is permitted, the modification is performed by updating the retention period specified in the archive policy 36 field of the object entry 30 (¶45, lines 19-25). Thus, the archive policy for an object is modified by modifying the object's entry in the object table. The system of Hochberg does not modify the archive policies for multiple objects at once by modifying information that specifies the retention period for multiple objects belonging to a retention class. Rather, in the system of Hochberg, the archive policy for each object is modified on an individual basis, by updating the object entry associated with that object.

That is, in the system of Hochberg, to modify the retention period of multiple objects, the object entry for each object must be modified. Hochberg does not disclose modifying the retention period for multiple previously stored objects by modifying the retention period for a retention class to which the objects belong.

Thus, claims 74 and 80 patentably distinguish over Hochberg such that the rejection should be withdrawn.

Claims 75-79 depend from claim 74 and claims 81-86 depend from claim 80 and are patentable for at least the same reasons as the independent claim from which they depend. Furthermore, for reasons similar to those discussed above for the claims depending from claims 29 and 45, the rejection of these claims is believed to be improper under MPEP §707, as the Office Action does not indicate what prior art reference is relied on in rejecting these claims or where the limitations of these claims are believed to be found in any such prior art reference, but merely asserts that these claims "can be rejected on a similar basis to the above."

Independent Claim 86

Independent claim 86 recites a controller to "transmit a request to the at least one storage system to modify the retention period specified by the retention class, thereby modifying a period of time during which the plurality of data units belonging to the retention class cannot be deleted from the at least one storage system."

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As should be clear from the discussion above, Hochberg does not disclose or suggest this limitation of claim 86. Thus, claim 86 patentably distinguishes over Hochberg such that the rejection of this claim should be withdrawn.

Claims 87-91 depend from claim 86 and are patentable for at least the same reasons. Furthermore, for reasons similar to those discussed above for the claims depending from claims 29 and 45, the rejection of these claims is believed to be improper under MPEP §707, as the Office Action does not indicate what prior art reference is relied on in rejecting these claims or where the limitations of these claims are believed to be found in any such prior art reference, but merely asserts that these claims "can be rejected on a similar basis to the above."
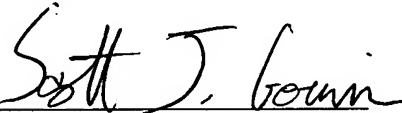
CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the telephone number listed below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: March 15, 2007   Respectfully submitted,

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